AMENDMENTS TO THE CLAIMS:

1. (Currently amended) An isolated and purified polynucleotide encoding an archaeal replication factor A ("RFA"), wherein the polynucleotide is selected from the group consisting of: a polynucleotide comprising the nucleotide sequence set forth in Figure 16 (SEQ ID NO: 65); and a polynucleotide encoding an amino acid sequence comprising the amino acid sequence set forth in Figure 17 (SEQ ID NO: 66).

2. (Original) The polynucleotide of claim 1, wherein the polynucleotide is cDNA.

3. (Original) The polynucleotide of claim 1, wherein the polynucleotide is mRNA.

4-6. (Canceled)

7. (Original) A vector comprising the polynucleotide of claim 1.

8. (Original) The vector of claim 7, wherein the vector is a plasmid.

9. (Original) The vector of claim 7, wherein the vector is a bacteriophage.

10. (Original) The vector of claim 7, wherein the vector is a retrovirus.

11. (Original) The vector of claim 7, wherein the vector is an adenovirus.

12. (Original) A host cell comprising the vector of claim 7.

13. (Original) The host cell of claim 12, wherein the host cell is a prokaryotic cell.

14. (Original) The host cell of claim 12, wherein the host cell is a eukaryotic cell.

15-22. (Canceled)

23. (Original) A method for producing replication accessory factors comprising: expressing the polynucleotide of the vector of claim 7 in a host cell; and purifying the expressed product.

24. (Original) The method of claim 23, wherein the host cell is a prokaryotic cell.

25. (Original) The method of claim 23, wherein the host cell is a eukaryotic cell.

26-56. (Canceled)

57. (Currently Amended) An isolated and purified polynucleotide encoding an archaeal replication factor A ("RFA") comprising: (a) a polynucleotide comprising the nucleotide sequence set forth in Figure 16 (SEQ ID NO: 65) or the nucleotide sequence of Figure 16 starting with nucleotide 7; (b) a polynucleotide encoding an amino acid sequence comprising the amino acid sequence set forth in Figure 17 (SEQ ID NO: 66) or the amino acid sequence of Figure 17 starting with amino acid 3; or (c) ~~an analog or degenerate variant of (a) or (b)~~ a polynucleotide encoding an amino acid sequence possessing 95% identity to SEQ ID NO: 66.

58. (Original) The polynucleotide of claim 57, wherein the polynucleotide is cDNA.

59. (Original) The polynucleotide of claim 57, wherein the polynucleotide is mRNA.

60-74. (Canceled)